

WHAT IS CLAIMED IS:

1. A combination inflation and relief valve, comprising a valve body in which is operatively mounted a reciprocating stem and stem head, said stem head including an inflation gasket resiliently urged in sealing engagement with an inflation valve seat of the valve body by means of an inflation spring entrained about the stem between said stem head and a poppet mounted to an end of said stem, said stem head further including at least one relief hole that is sealed by means by a relief gasket mounted on a push disk, said push disk being reciprocatably coupled to the stem to urge said relief gasket in sealing engagement with said relief hole by means of a relief spring.

2. A combination inflation valve and relief valve, comprising in combination:

an inflation valve including a generally cylindrical valve body having an internal annular inflation valve seat and an annular inflation spring seat, a reciprocating stem head positioned within said valve body to which is concentrically mounted an inflation gasket for urging into sealing engagement with the inflation valve seat by means of an inflation spring concentrically positioned about said stem and entrained between said

annular inflation spring seat and a poppet guide securely affixed to the inflation end of the stem; and

a relief valve including a push disk having a central hole for sliding engagement along the length of said stem, a relief gasket mounted to the relief side of said push disk urged in sealing alignment with at least one relief hole formed through the stem head by means of a relief spring positioned concentrically about said stem and entrained between said push disk and said poppet guide.

3. The combination inflation and relief valve as set forth in Claim 2, wherein said stem and said stem head are integrally formed.

4. The combination inflation and relief valve as set forth in Claim 2, wherein said inflation gasket comprises an angular surface for sealing engagement with said annular inflation seat.

5. The combination inflation and relief valve as set forth in Claim 2, wherein said relief gasket comprises a cupped gasket that seals about said relief hole.

6. The combination inflation and relief valve as set forth in Claim 2, wherein said relief gasket comprises an O-ring gasket that seals against opposing annular edges of an annular slot formed in said stem head in fluid communication with said relief hole.

7. The combination inflation and relief valve as set forth in Claim 2, wherein said inflation spring and said relief spring are concentrically mounted in alignment about said stem by a lower guide and an upper guide of said poppet, respectively.

8. The combination inflation and relief valve as set forth in Claim 2, wherein a lower surface of said stem head comprises a boss for aligning said relief spring concentrically.

9. The combination inflation and relief valve as set forth in Claim 8, wherein said poppet comprises radial tabs defining said surfaces.

10. The combination inflation and relief valve as set forth in Claim 2, wherein said poppet is permanently affixed to an end of said stem.

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therefrom at any time in dispute according to 37 CFR 1.1017.

09-15-03
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